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NOTES AND NEWS.

Edited by W. DeW. Cairns.

The mathematical physical society of Kazan, Russia, offers the Lobatchewski prize of 500 roubles for productions relative to non-euclidean geometry, these to be submitted by Nov. 4, 1914.

Professor William J. Milne, Ph.D., LL.D., president of the New York State Normal College, Albany, N. Y., and author of many school texts in arithmetic, algebra and geometry, died September 4 at Bethlehem, N. H.

A second edition of Professor E. L. Thorndike's "Introduction to the Theory of Mental and Social Measurements" which was published in 1904 (Science Press, New York) has recently appeared.

In the May number of *Popular Science Monthly* occurs a paper by Professor William Marshall on "The theory of relativity and the new mechanics."

Professor W. F. Osgood now holds the Perkins professorship of mathematics at Harvard University, the chair formerly held by Professor W. E. Byerly.

Harvard University conferred the degree of doctor of science upon Professor W. C. Sabine at the commencement in June, 1914. He now holds the Hollis professorship of mathematics and natural philosophy at Harvard, the chair formerly held by Professor B. O. Peirce.

The thirty-fourth regular meeting of the Chicago Section of the American Mathematical Society will be held at the University of Chicago on Monday and Tuesday, December 28, 29, 1914, the first session opening at 10 o'clock a. m., in Room 32, Ryerson Physical Laboratory.

Professor R. C. Archibald has an article in the May *Bulletin of the American Mathematical Society* on "Time as a fourth dimension."

A warm tribute by Professor John Trowbridge to the memory of the late Professor B. O. Peirce, of Harvard University, will be of great interest to the many American physicists and mathematicians who have studied with Professor Peirce. This appears in a recent number of the *Harvard Graduates' Magazine.*

Mr. R. A. Johnson, instructor in mathematics in Adelbert College, Western Reserve University, offers for the first semester of the year 1914–15 a teachers' course in elementary geometry. The meetings of the course are held at four o'clock in the afternoon, an hour which makes possible the attendance of teachers in the Cleveland public schools.

At the tercentenary celebration at the University of Groningen, the degree of doctor of science was conferred upon Professor E. B. **Van Vleck** of the University of Wisconsin.

Professor F. **Anderegg**, of Oberlin College, has returned after a year's leave of absence. While in London he submitted to an operation for appendicitis, from which he recovered speedily.

A reprint from "*The Merchistonian*" sent to the editor by Professor F. **Cajori** from Edinburgh contains a careful historical description of the Tower of Merchiston, later Merchiston House, and a brief but entertaining sketch of the life of John Napier with the reproduction of two of his portraits.

W. E. **Edington**, B.A., Indiana State Normal School, graduate student in the University of Chicago, 1912–13, and instructor in the University of Colorado, 1913–14, has been elected professor of mathematics in the University of New Mexico at Albuquerque.

Because considerable difficulty has been experienced now and then by American teachers in obtaining the reports of the Mathematical Association, we reprint the following notice from the *Mathematical Gazette*, the organ of the Association:

> The following Reports have been issued by the Association:—(i) "Reports on the Teaching of Elementary Mathematics," 1902–1908 (Geometry, Arithmetic and Algebra, Elementary Mechanics, Advanced School Mathematics, the Course required for Entrance Scholarships at the Universities, Mathematics in Preparatory Schools), price 6d. net; (ii) "Revised Report on the Teaching of Elementary Algebra and Numerical Trigonometry" (1911), price 3d. net; (iii) "Report on the Teaching of Mathematics in Preparatory Schools," price 3d. net; and (iv) "Report on the Correlation of Mathematical and Science Teaching," by a Joint Committee of the Mathematical Association and the Association of Public School Science Masters, price 6d. net; (v) A General Mathematical Syllabus for Non-Specialists in Public Schools, price 2d. net. These reports may be obtained from the Publishers of the *Gazette*, G. Bell and Sons, Ltd., Portugal St., Kingsway, London.

Among the articles contained in "The Mathematics Teacher" in the issues of March and June, 1914, the following may be mentioned as of interest to our readers: "Mathematics as a means to culture and discipline" (13 pages) by A. D. Yocum; "What mathematical knowledge and ability may reasonably be expected of the student entering college" (8 pages) by J. N. Hart; "Freshman algebra and the average freshman" (16 pages) by Ella D. Gray; and "Mathematics: the subject and the teacher" (12 pages) by F. C. Ferry.

The discussion of "A Kinetic Theory of Gravitation" by Charles F. Brush in *The Proceedings of the American Philosophical Society* for January–May, 1914, calls attention to a new way by which we may account for the immense forces in operation in the mutual attractions of astronomical bodies.

Today the science of mathematics is so vast and its development is so rapid that no one unaided could keep in touch with its growth in a single important field of considerable extent. Consequently it is necessary to have published reviews of the articles so that by means of these the individual worker will be able to determine quickly what are the recent additions to knowledge along the line in which he is especially interested. These reviews should meet two requirements which militate against each other, namely, they should be available promptly after the appearance of the article and they should be carefully prepared. The first of these requirements is met in *Revue Semestrielle des Publications Mathématiques,* an excellent and very prompt review of nearly all additions to mathematical literature; it does not appear to be used as much in this country as it might be. The second requirement is best met in the well-known *Jahrbuch über die Fortschritte der Mathematik.*

In recognition of the sixth international congress of mathematicians, to be held in Stockholm in 1916, King Gustave V has offered a gold medal bearing the likeness of Karl Weierstrass and a prize of 3,000 crowns, for any important discovery in the field of the theory of analytic functions. All manuscripts are to be submitted to *Acta mathematica* before October 31, 1915, the hundredth anniversary of the birth of Weierstrass.

The French Academy of Science offers the following prizes: (1) *Prix Bordin* for 1915 (3,000 francs), for making any noteworthy progress in the investigation of curves of constant torsion, and for determining if possible such of these curves as are algebraic, or at least such as are unicursal. (2) *Grand Prix des Sciences mathématiques* for 1916 (3,000 francs), for applying the methods of Henri Poincaré to the integration of linear algebraic differential equations, selected from the simplest. (3) *Prix Bordin* for 1917 (3,000 francs), for perfecting in any important way the arithmetical theory of non-quadratic forms. (4) *Prix Vaillant* for 1917 (4,000 francs), for determining and investigating all the surfaces which can be generated in two different ways by the displacement of an invariable curve.

Papers must be submitted to the Academy before the close of the year preceding the awarding of the various prizes.

Recent numbers of *Rendiconti del Circolo Matematico di Palermo* contain the following papers by Americans: Professor G. D. BIRKHOFF, "Note on the expansion problems of ordinary linear differential equations"; Professor J. EIESLAND, "On the algebraic curves of a tetrahedral complex and the surfaces conjugate to it"; Professors G. N. BAUER and H. L. SLOBIN, "Some transcendental curves and numbers"; Professor W. H. METZLER, "Rectangular arrays"; Dr. DUNHAM JACKSON, "A formula of trigonometric interpolation." This journal has published as a reprint the most important speeches and articles in memory of Henri Poincaré, together with a letter from Poincaré to the editor of *Rendiconti* on the subject of his last memoir, and a list of the memoirs of Poincaré which appeared in *Rendiconti* from 1888 to 1912.

The first regular meeting of the Association of Mathematics Teachers of New Jersey was held at Rutgers College, New Brunswick, N. J., on November 7th. Further notice of this meeting and of the purpose of this new organization will be given in a later issue of the MONTHLY.

The office of the American Mathematical Society, fitted out a year ago by Columbia University, was completely destroyed by a fire in University Hall on October 10, with loss of furniture, records, and stock of *Bulletin* and *Transactions* amounting to over $2000. The Society has duplicate stock of the *Transactions* and of the later years of the *Bulletin.* But the early volumes of the latter (as far as Vol. X) were completely lost. The Society will be glad to receive copies of these early volumes from its members and others who may be willing to donate them.

At the Pennsylvania State College, Dr. E. R. SMITH has been promoted to an associate professorship in mathematics and Dr. J. E. ROWE of Dartmouth College has been elected to an assistant professorship. It may be noted concerning the scope of work of this college that courses will be given during the fall term in theory of functions of real and complex variables, differential equations, functions defined by differential equations, statistical methods, Newtonian potential, and theory of numbers. Professor Stecker of this faculty gave one of the first courses in integral equations offered in the United States.

To pay proper tribute to the memory of Henri Poincaré and to link his name with an endowment for scientific purposes, a very representative international committee offers to the friends, colleagues and admirers of Poincaré the opportunity of sharing in a subscription which (1) shall furnish medals with the likeness of Poincaré, and (2) shall constitute a fund, the income from which is to be used by the Academy of Science to encourage younger scholars engaged in those branches of science whose development has been assured by his genius; namely, mathematical analysis, celestial mechanics, mathematical physics, philosophy of science. A bronze medal is given those subscribing from 25 to 50 francs, a silver medal for larger subscriptions. Subscriptions are to be sent to ERNEST LEBON, rue des Écoles, n° 4, Paris 5^e.

The twenty-first summer meeting of the American Mathematical Society was held at Providence, R. I., on Tuesday and Wednesday, September 8, 9, 1914, as a part of the ceremonies connected with the celebration of the one-hundred and fiftieth anniversary of the founding of Brown University. There were fifty-two members present, including twelve from the middle west and far west, and thirty-three papers were presented during three half day sessions. The entertainment of the members given by President Faunce, Chancellor Chace, Professor Davis, and other members of the mathematical faculty of Brown University, was so generous and whole hearted that every one present will carry the most pleasant recollections of it for years to come. There was a luncheon, an afternoon tea, a reception, a dinner, and last but not least a personally conducted tour about Newport under the guidance of Professors Richardson and Archibald, who as local members of the committee of arrangements were everywhere present and all things to all of us. President Faunce gave a notable address in his inimitable style at the dinner on Tuesday evening and Professor Carl Barus, of the department of physics in Brown University, gave an illuminating talk on "The relations of mathematics to physics." The mere enumeration of all these good things, not to mention the friendly discussions of the scientific papers presented and the general good fellowship always found on these occasions, should be sufficient to make every member of the Society resolve to attend the next meeting, which is to be held in San Francisco during the summer of 1915.

SPECIAL ANNOUNCEMENT.

As important evidence that the MONTHLY will maintain in 1915 the same high standard which has been set in the two years since its reorganization, we call attention to the following announcement:

Under the title " History of Zeno's Arguments on Motion," Professor Cajori will begin in the January, 1915, issue a series of articles which promise to be of unusual interest. Our present well-organized theory of limits, like every modern system of thought in all fields, has its roots far back in human history. Just as the ideas of negative and imaginary numbers struggled for recognition and formulation through hundreds of years, so the notion of a variable approaching a limit and all of the far-reaching consequences connected with the consideration of such a concept have gone through a process of slow development. Professor Cajori traces this development through a two-thousand-year struggle for light in which practically all of the great mathematicians and philosophers of the time were engaged. These articles will begin with the Volume XXII and will extend well through the year 1915. The editors are greatly pleased that we are able to offer such an attraction to the readers of the MONTHLY for the coming year. No teacher who has to deal with the theory of limits can afford to miss this latest product of Professor Cajori's historical researches.

As most subscriptions expire with the December issue, the renewal notices will be sent out in a few days, in order that all may have ample time to renew their subscriptions before the end of the year, and thus be sure of receiving the January issue containing the first instalment of Professor Cajori's articles.

The editors will greatly appreciate your prompt action in this matter, and they would suggest that you can do a real service to those in your acquaintance by calling their attention to this unique opportunity and sending their names to the Managing Editor for sample copies.